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98 Load dependence of cardiac output in biventricular pacing: Right ventricular volume overload in pigs

David G. Rabkin, MD, Lauren J. Curtis, BA, Santos E. Cabreriza, BA, Alan D. Weinberg, MS, and Henry M. Spotnitz, MD, New York, NY

Tricuspid insufficiency was simulated with a conduit in 6 anesthetized pigs with third-degree heart block. Cardiac output was highest when the left ventricle was paced before the right, inverse to previous findings in pulmonary stenosis. This supports the hypothesis that biventricular pacing optimization is load dependent.

103 Myocardial apoptosis prevention by radical scavenging in patients undergoing cardiac surgery

Uwe M. Fischer, MD, Paschalis Tossios, MD, Astrid Huebner, MD, Hans J. Geissler, MD, Wilhelm Bloch, PhD, and Uwe Mehlhorn, MD, Cologne, Germany

In CABG patients we investigated the effect of the radical scavenger *N*-acetylcysteine (NAC) versus placebo on LV cardiac myocyte apoptosis induction. Cardioplegic arrest initiated the apoptosis signal pathway in human LV cardiac myocytes. This apoptosis induction was prevented by NAC.

109 Inhaled prostacyclin reduces cardiopulmonary bypass-induced pulmonary endothelial dysfunction via increased cyclic adenosine monophosphate levels

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CPB triggers a systemic inflammatory response that can contribute to pulmonary hypertension. Administration of inhaled prostacyclin during CPB in a swine model has a favorable impact on the pulmonary endothelial function associated with preservation of the cAMP content of pulmonary arteries and stabilizes the mean pulmonary artery pressure.

Evolving Technology (ET)

117 Flow dynamics of the St Jude Medical Symmetry aortic connector vein graft anastomosis do not contribute to the risk of acute thrombosis

A. Redaelli, PhD, F. Maisano, MD, G. Ligorio, MS, E. Cattaneo, PhD, F. M. Montecchi, MS, and O. Alfieri, MD, Milan, Italy

Recent studies have reported graft failure after use of the St Jude Medical Symmetry aortic connector. By means of computational fluid dynamics, we compared the flow patterns inside automated and hand-sewn anastomosis models. Results show that graft failure is probably not due to flow dynamics conditions.

General Thoracic Surgery (GTS)

124 Replacement of a tracheal defect with a tissue-engineered prosthesis: Early results from animal experiments [VIDEO] ●

Jhngook Kim, MD, Soo Won Suh, PhD, Ji Yeon Shin, MS, Jin Hoon Kim, MS, Yong Soo Choi, MD, and Hojoong Kim, MD, Seoul, Korea

We developed a novel tracheal prosthesis with viable mucosa, which was made from a porous polylactic glycolic acid scaffold with cultured skin epithelial cells. After placement in the peritoneal cavity with omental wrapping for 1 week, thoracic tracheal replacement was performed in dogs. The follow-up bronchoscopy showed no stenosis.

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